

Natural Resources Wales

- The monthly rainfall total received for Wales during February was 156% of the Long Term Average (LTA, 1961-90). North, South West and South East Wales received 161%, 152% and 156% of the LTA, respectively.
- At the end of February, soil moisture deficit (SMD) values across Wales were between 0 and 0.8mm for all MORECS squares. The difference when compared to the long term average February (1961-90), ranged from -1.6mm to 0.1mm.
- For river flows in Wales, 20 out of 29 indicator sites were classed as *Above normal* for February, 4 sites were classed as *Notably high* and 4 sites were classed as *Normal*. The remaining one site was classed as *Exceptionally high*.
- The overall reservoir storage across all indicator sites was greater than 95% full at the end of February and all reservoirs were within normal operating ranges.

Rainfall*

The monthly rainfall total received for Wales was 156% of the LTA for February. The percentage of rainfall recorded in catchments compared with the long term average (1961-90) across Wales was between 129% (Arthro) and 176% (Dyfi). The rainfall total for Wales was 56mm more than the February LTA. For South East, South West and North Wales the rainfall totals were 156%, 152% and 161% of the LTA, respectively.

Rainfall Map [National](#)

Rainfall Charts [National & Areas](#) [South East Wales](#) [North Wales](#) [South West Wales](#)

* using NCIC (National Climate Information Centre) data (Source: Met Office © Crown Copyright)

Soil Moisture Deficit/Recharge

For the SMD values, The 23 MORECS squares had SMD values between 0 (saturated) and 0.8mm. It's normal for the soils to be saturated at this time of year.

SMD Map [National](#)

SMD Charts [Compare to LTA](#)

All data are provisional and may be subject to revision.

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River Flows

River flows at 20 sites (out of 29) were classed as *Above normal*. 4 sites were classed as *Notably high* and 4 sites were classed as *Normal*. The remaining site was classed as *Exceptionally high*.

North: Flows in the area ranged from 120% (River Cefni at Bodfordd) to 162% (River Clwyd at Pont y Cambwll) of the February LTA Values.

South East: Flows in the area ranged from 120% (River Monnow at Grosmont) to 242% (River Usk at Trostrey Weir) of the February LTA values.

South West: The river flows within this area ranged from 112% (River Ystwyth at Pont Llolwyn) to 161% (River Llynfi at Coytrahen) of the February LTA values.

River Flow Map [National](#)
River Flow Table [% of LTA and compare to previous year](#)
River Flow Charts [South East Wales](#) [North Wales](#) [South West Wales](#)

Groundwater Levels

Groundwater levels for February at all indicator sites (10 sites) were classed between *Notably low* (Eastwick) and *Above normal* (Pant-y-Lladron, Fernbank and Dodleston) with 5 sites (Greenfield Garage, Pont y Cambwll, Llanfair DC, Hollybush and Broxton) classed as *Normal* and 1 site (Handley) classed as *Below normal*.

Groundwater Map [National](#)
Groundwater Charts [South East Wales](#) [North Wales](#) [South West Wales](#)

Reservoir Storage

At the end of February almost all the indicator reservoirs (15 out of 18) were greater than 95% full and one pump storage reservoir (Llandegfedd) was at 83% of the capacity due to being drawn down for reservoir safety maintenance works. This reservoir has been refilled by abstracting water from a river and subsequently transferring and expected to be full by the end of April.

Reservoir Charts [South East Wales](#) [North Wales](#) [South West Wales](#)

All data on Water Situation Reports are provisional, based on spot readings, and are subject to revision.

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Natural Resources Wales

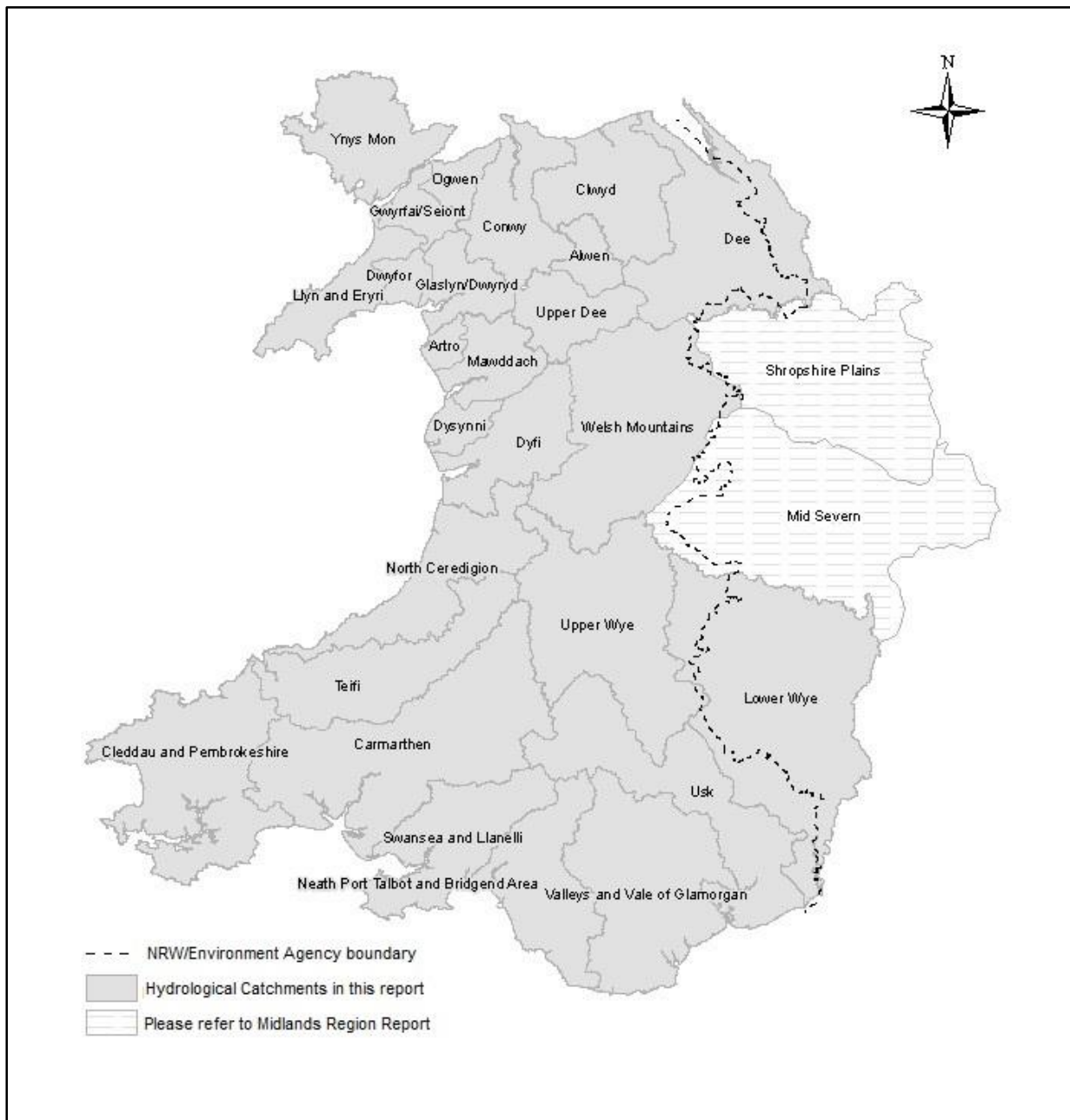


Figure 1: The Natural Resources Wales Water Situation Report features sites in the catchments shown. Parts of the Shropshire Plains and Mid Severn catchments are within Wales. For full information on these catchments, please see the Environment Agency Midlands Water Situation Report.

For areas adjoining Natural Resources Wales, please see the reports for Environment Agency Midlands and North West England:

[Environment Agency - Midlands, England Water Situation Report](#)
[Environment Agency - North West, England Water Situation Report](#)

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Rainfall

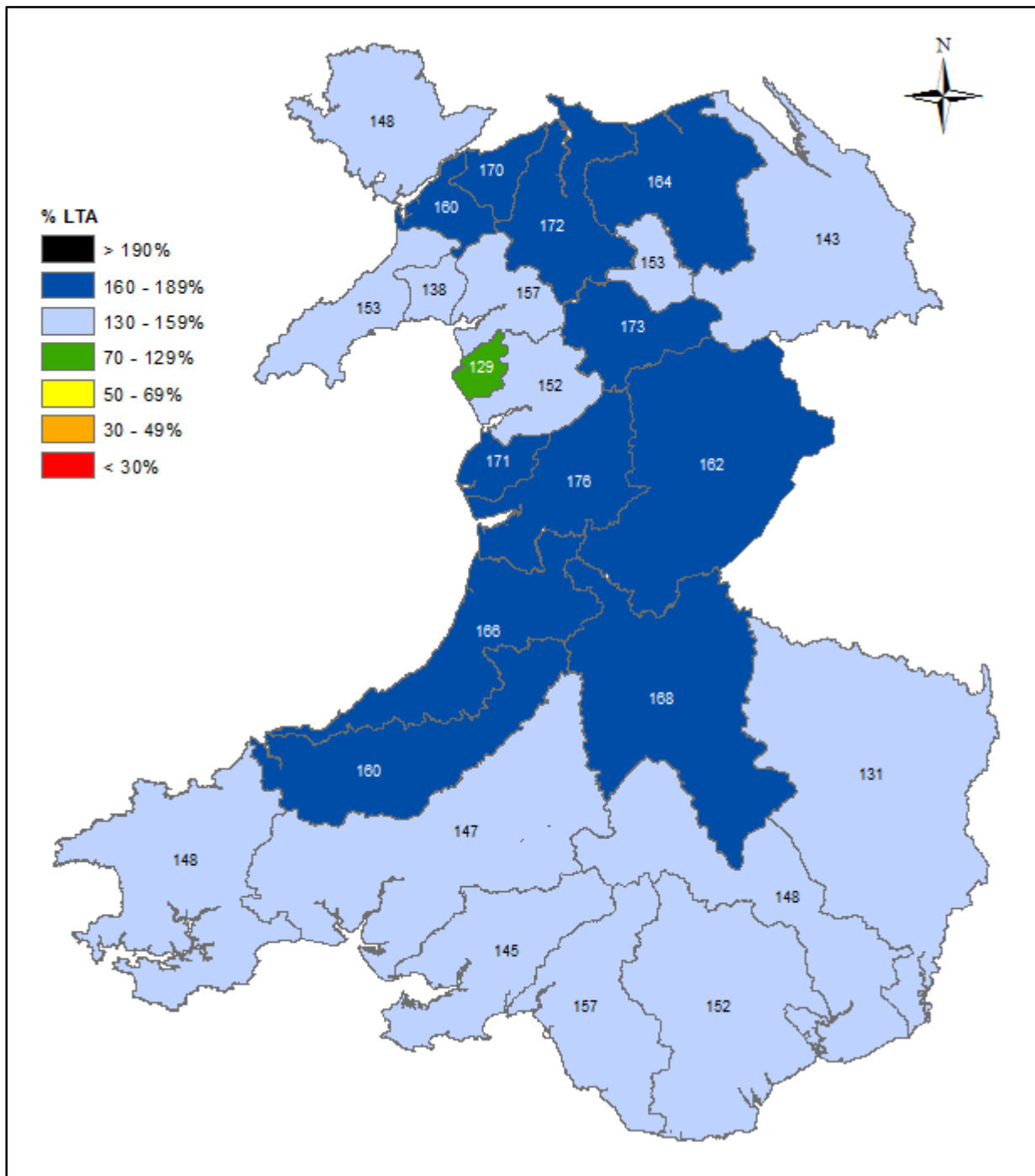


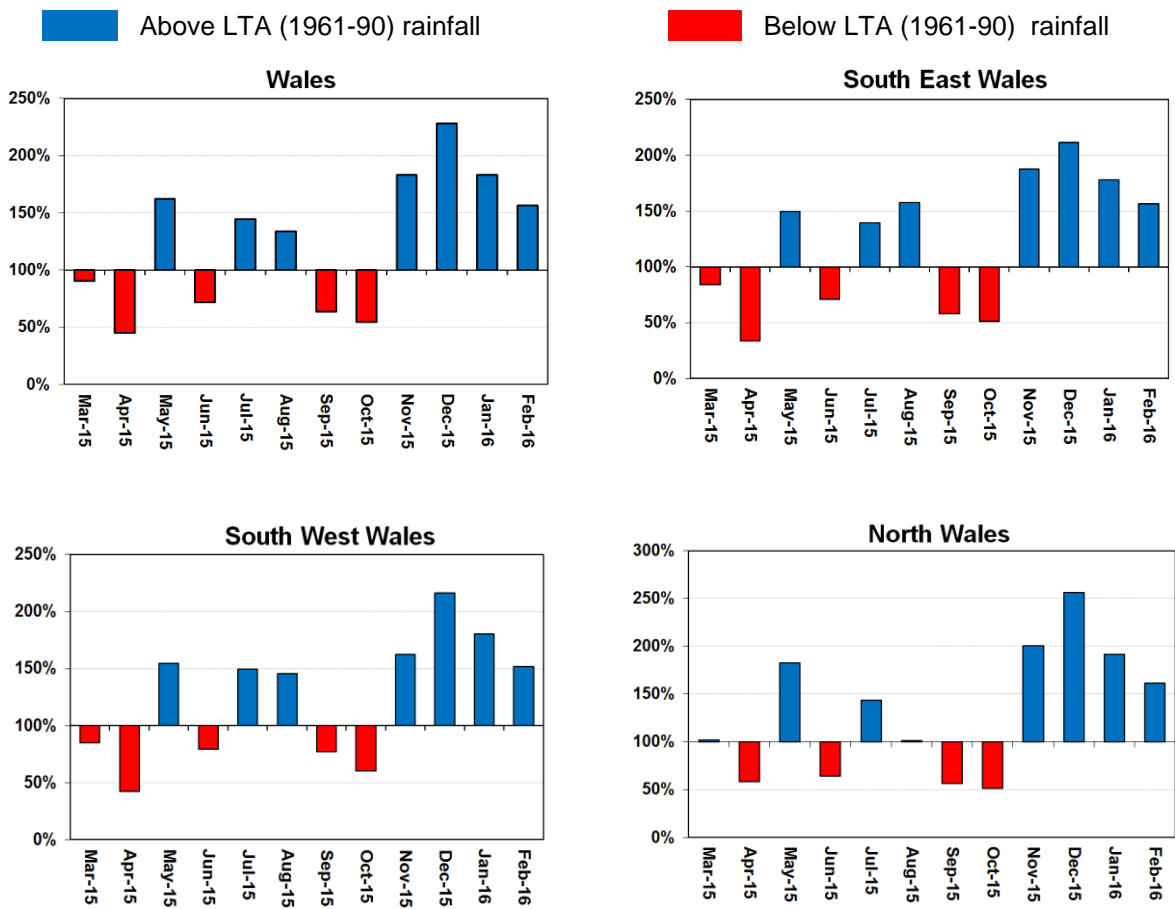
Figure 2: Calculated catchment average February rainfall totals as a percentage of the 1961-90 February long term average for Natural Resources Wales catchments, using NCIC (National Climate Information Centre) data (Source: Met Office © Crown Copyright).

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Rainfall Charts

Figure 3: Rainfall Charts: National and Areas



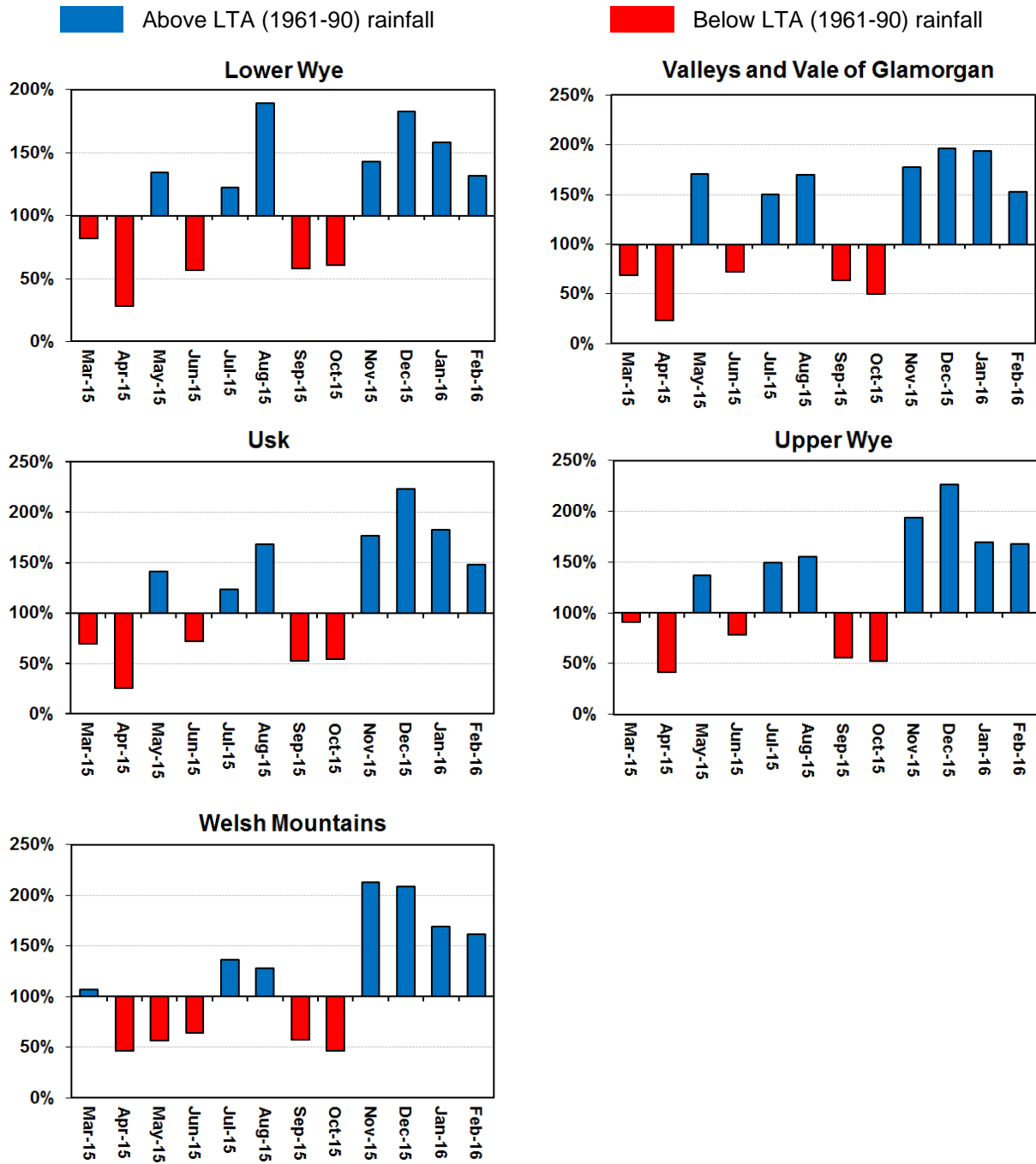
Comparison of monthly rainfall totals to the 1961-90 long term average expressed as percentage for Natural Resources Wales and Areas, using NCIC (National Climate Information Centre) data (Source: Met Office © Crown Copyright).

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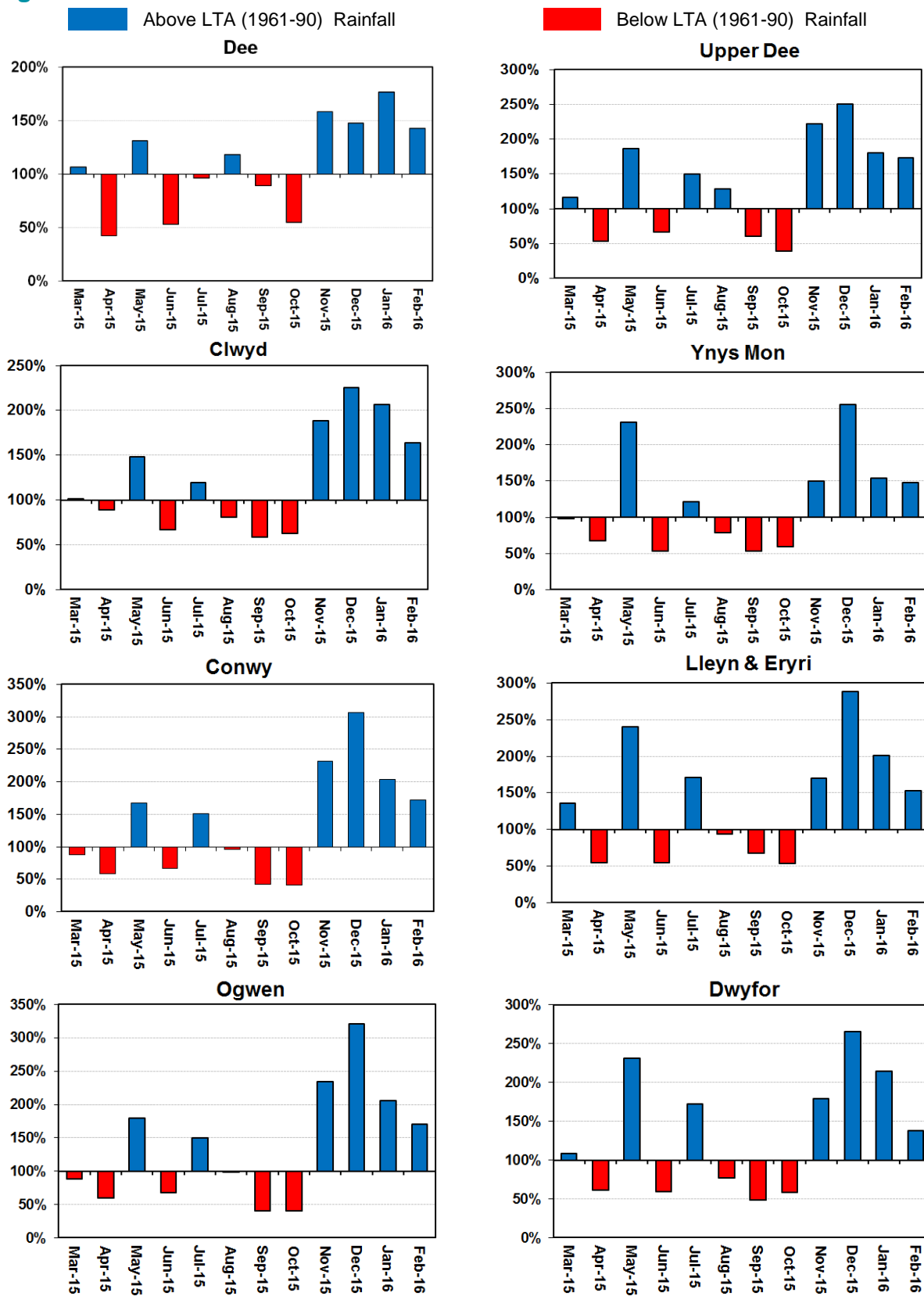
Figure 4: Rainfall Charts: South East Wales



Comparison of monthly rainfall totals to the 1961-90 long term average expressed as percentage for South East Wales, using NCIC (National Climate Information Centre) data (Source: Met Office © Crown Copyright).

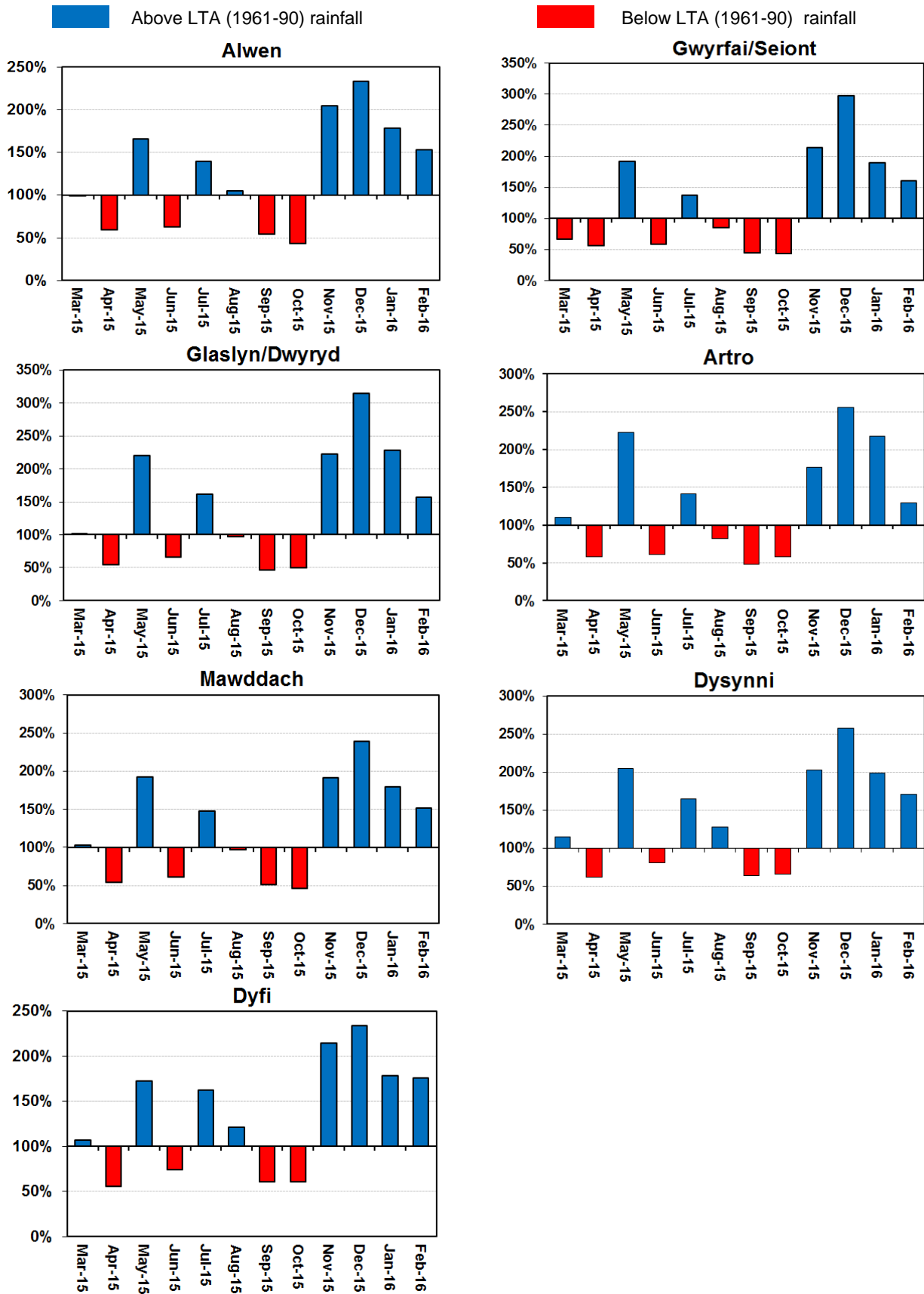
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Figure 5: Rainfall Charts: North Wales



Comparison of monthly rainfall totals to the 1961-90 long term average expressed as percentage for North Wales, using NCIC (National Climate Information Centre) data (Source: Met Office © Crown Copyright).

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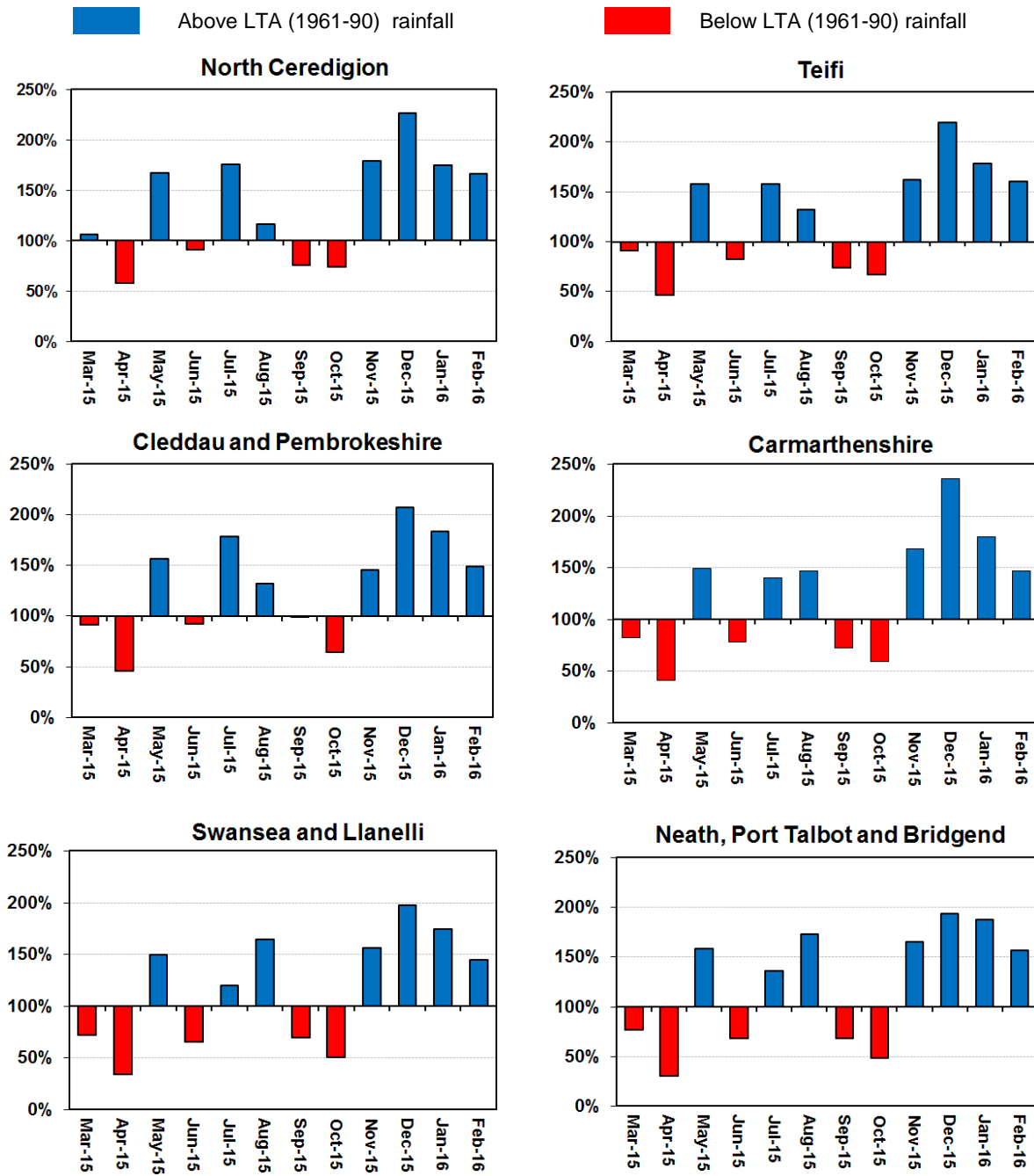


Comparison of monthly rainfall totals to the 1961-90 long term average expressed as percentage for North Wales, using NCIC (National Climate Information Centre) data (Source: Met Office © Crown Copyright).

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Figure 6: Rainfall Charts: South West Wales



Comparison of monthly rainfall totals to the 1961-90 long term average expressed as percentage for South West Wales, using NCIC (National Climate Information Centre) data (Source: Met Office © Crown Copyright).

Soil Moisture Deficit (SMD)

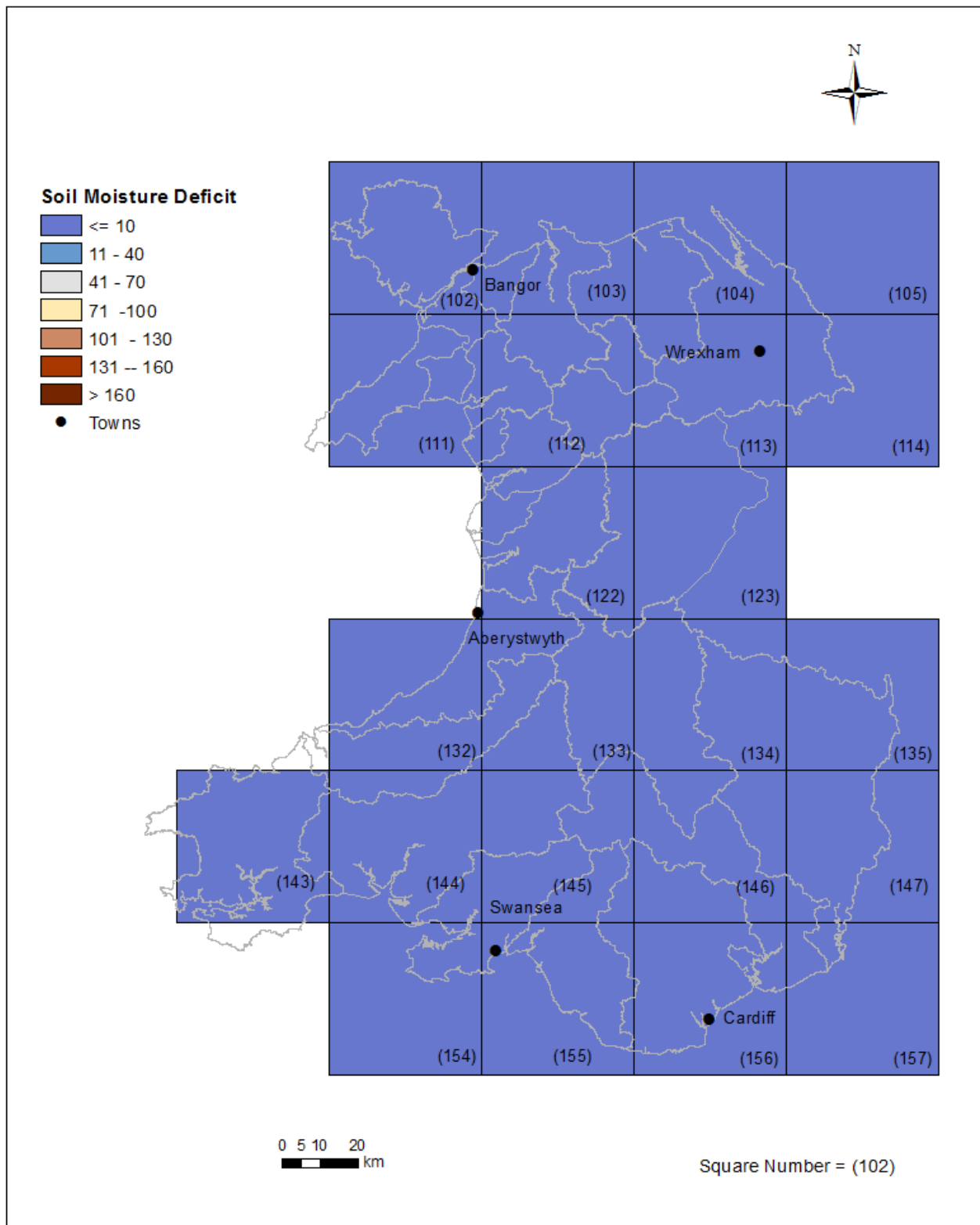


Figure 7: MORECS soil moisture deficits (mm) for February for real land use for Natural Resources Wales (Source: Met Office © Crown Copyright).

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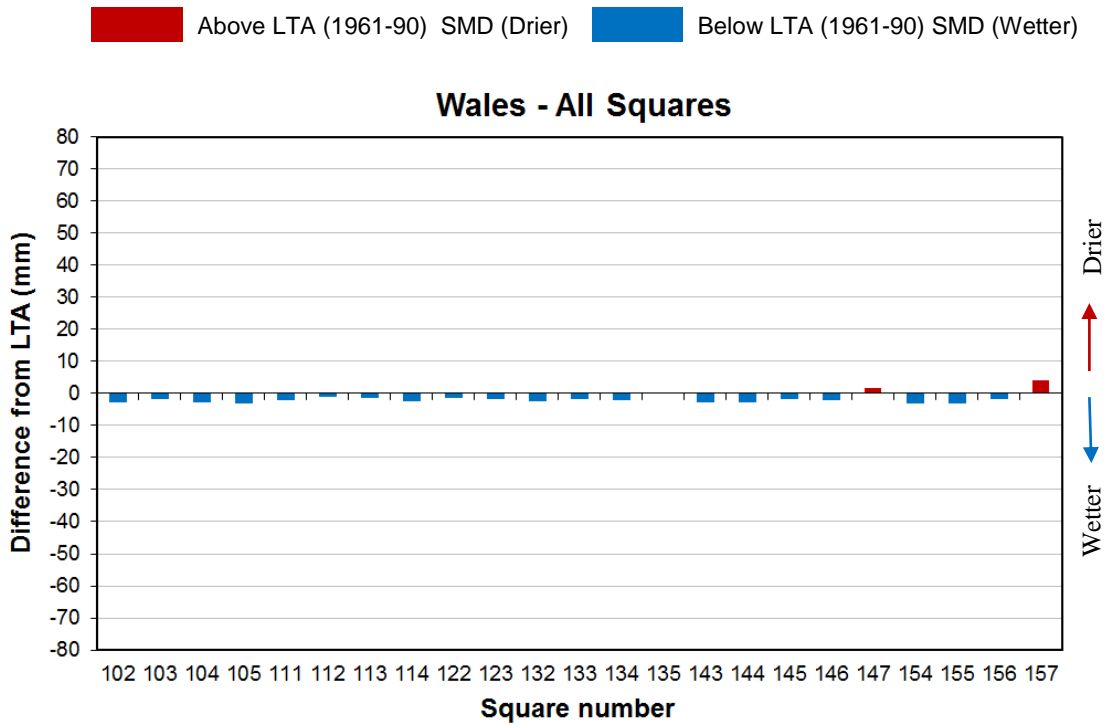


Figure 8: MORECS month end soil moisture deficits difference (mm) from the 1961-90 long term monthly average (LTA) for February for real land use for Natural Resources Wales squares (Source: Met Office © Crown Copyright).

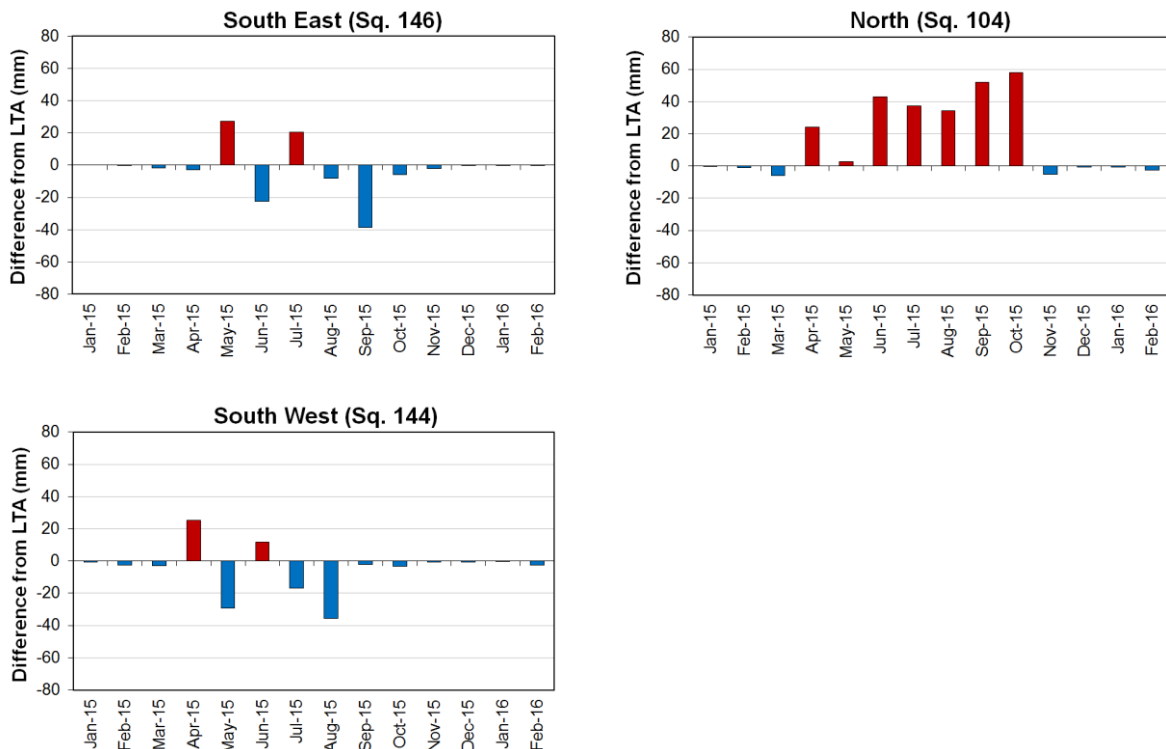


Figure 9: MORECS month end soil moisture deficit difference (mm) from the 1961-90 long term monthly average (LTA) for real land use for South East, North and South West (Source: Met Office © Crown Copyright). (Note: no LTA available for Natural Resources Wales)

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River Flow

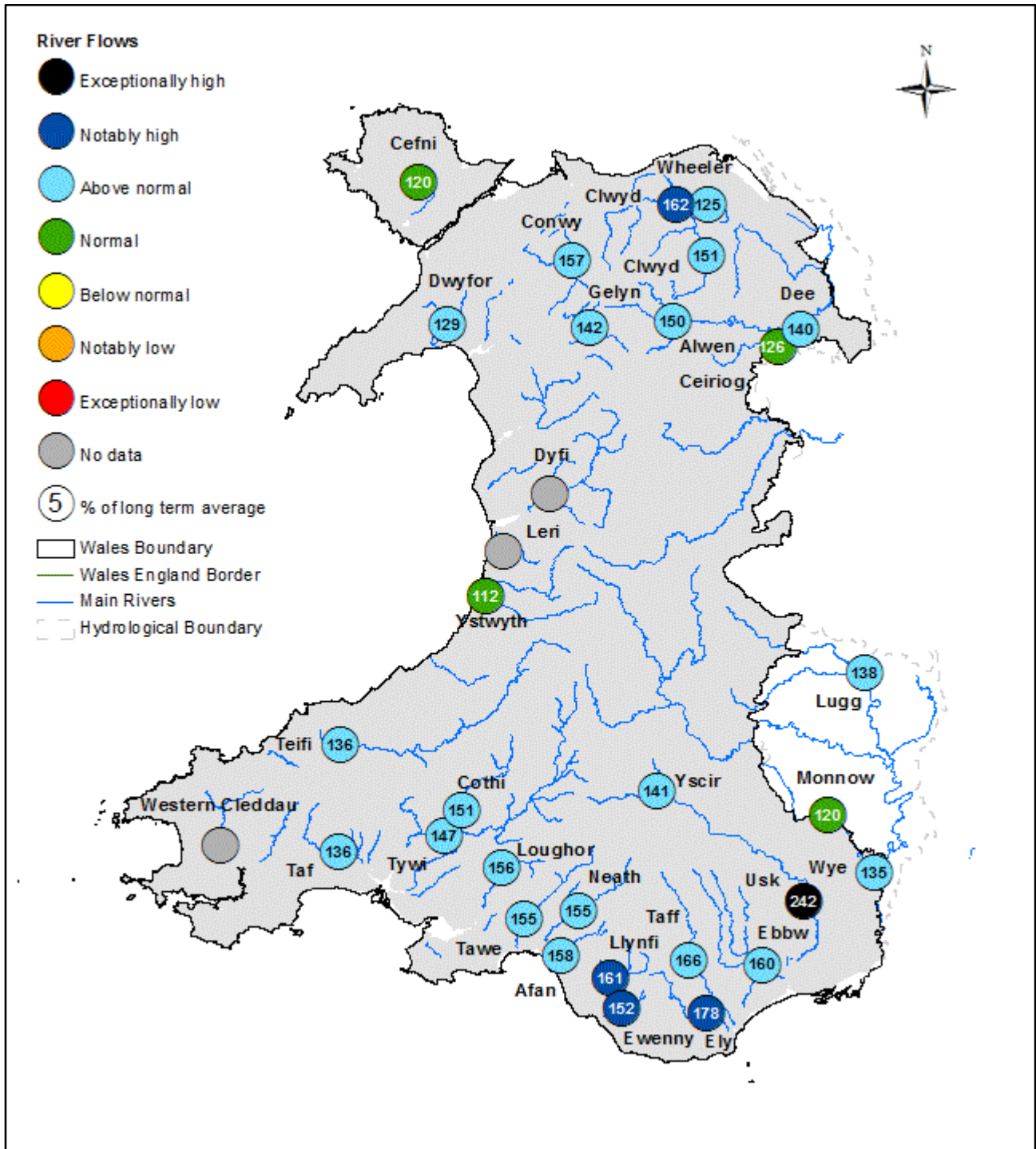


Figure 10: Monthly mean river flow for February, classed relative to analysis of historic February monthly means (Source: Natural Resources Wales).

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SITE NAME	RIVER	February 2016			February 2015		February LTA		
		Class	% of LTA	Flow (m3/s)	% of LTA	Flow (m3/s)	LTA	Monthly Min (m3/s)	Monthly Max (m3/s)
River Flow Sites : South East Area									
Butts Bridge	Lugg	Above normal	138%	13.50	65%	6.32	9.80	3.15	22.40
Grosmont		Normal	120%	12.10	59%	5.92	10.08	3.30	28.10
Pont ar Yscir	Yscir	Above normal	141%	3.90	82%	2.26	2.76	0.74	7.98
Pontypridd	Taff	Above normal	166%	46.80	70%	19.79	28.18	8.17	90.30
Redbrook	Wye	Above normal	135%	161.35	72%	86.91	119.95	41.00	329.00
Rhiwderin	Ebbw	Above normal	160%	16.80	57%	5.95	10.50	3.32	33.40
St Fagans	Ely	Notably high	178%	11.10	113%	7.02	6.23	1.90	13.90
Trostrey Weir	Usk	Exceptionally high	242%	67.99	101%	28.48	28.12	14.20	86.20
River Flow Sites : North Area									
Bodfari	Wheeler	Above normal	125%	1.33	68%	0.72	1.06	0.39	2.59
Bodffordd	Cefni	Normal	120%	0.71	52%	0.30	0.59	0.24	1.28
Brynkinalt Weir	Ceiriog	Normal	126%	5.58	81%	3.61	4.44	0.72	9.74
Cwmlanerch	Conwy	Above normal	157%	37.20	68%	16.12	23.75	4.40	80.70
Cynefail	Gelyn	Above normal	142%	1.28	94%	0.85	0.90	0.21	2.88
Dol y Bont	Leri						1.92	0.73	4.28
Druid	Alwen	Above normal	150%	10.50	67%	4.65	6.98	2.00	21.10
Dyfi bridge	Dyfi						28.83	5.17	98.30
Garndolbenmaen	Dwyfor	Above normal	129%	3.86	87%	2.62	3.00	0.72	6.12
Manley Hall	Dee	Above normal	140%	61.50	69%	30.25	43.89	12.90	124.00
Pont y Cambwll	Clwyd	Notably high	162%	15.30	85%	8.00	9.44	2.24	23.20
Ruthin Weir	Clwyd	Above normal	151%	3.64	68%	1.63	2.41	0.64	6.19
River Flow Sites : South West Area									
Capel Dewi	Tywi	Above normal	147%	76.50	83%	43.01	51.92	14.20	143.00
Clog y Fran	Taf	Above normal	136%	14.30	90%	9.48	10.50	3.65	27.20
Coytrahen	Llynfi	Notably high	161%	4.54	116%	3.28	2.82	0.78	6.56
Felin Mynachdy	Cothi	Above normal	151%	22.80	80%	12.02	15.06	3.71	41.10
Glanteifi	Teifi	Above normal	136%	52.80	91%	35.53	38.94	11.10	91.20
Keepers Lodge	Ewenny	Notably high	152%	3.76	109%	2.69	2.47	1.00	4.75
Marcroft	Afan	Above normal	158%	9.23			5.85	1.88	14.30
Pont Llolwyn	Ystwyth	Normal	112%	8.39	98%	7.34	7.46	2.06	22.70
Resolven	Neath	Above normal			88%	10.85	12.36	1.87	41.00
Tir-y-Dail	Loughor	Above normal	155%	19.20	95%	2.57	2.72	0.98	6.30
Ynystanglws	Tawe	Above normal	156%	4.23	106%	15.49	14.56	2.45	42.60

Figure 11: Monthly mean river flow for February with comparison against previous year expressed as a percentage of the February long term average and classed relative to analysis of historic February monthly means. (Source: Natural Resources Wales).

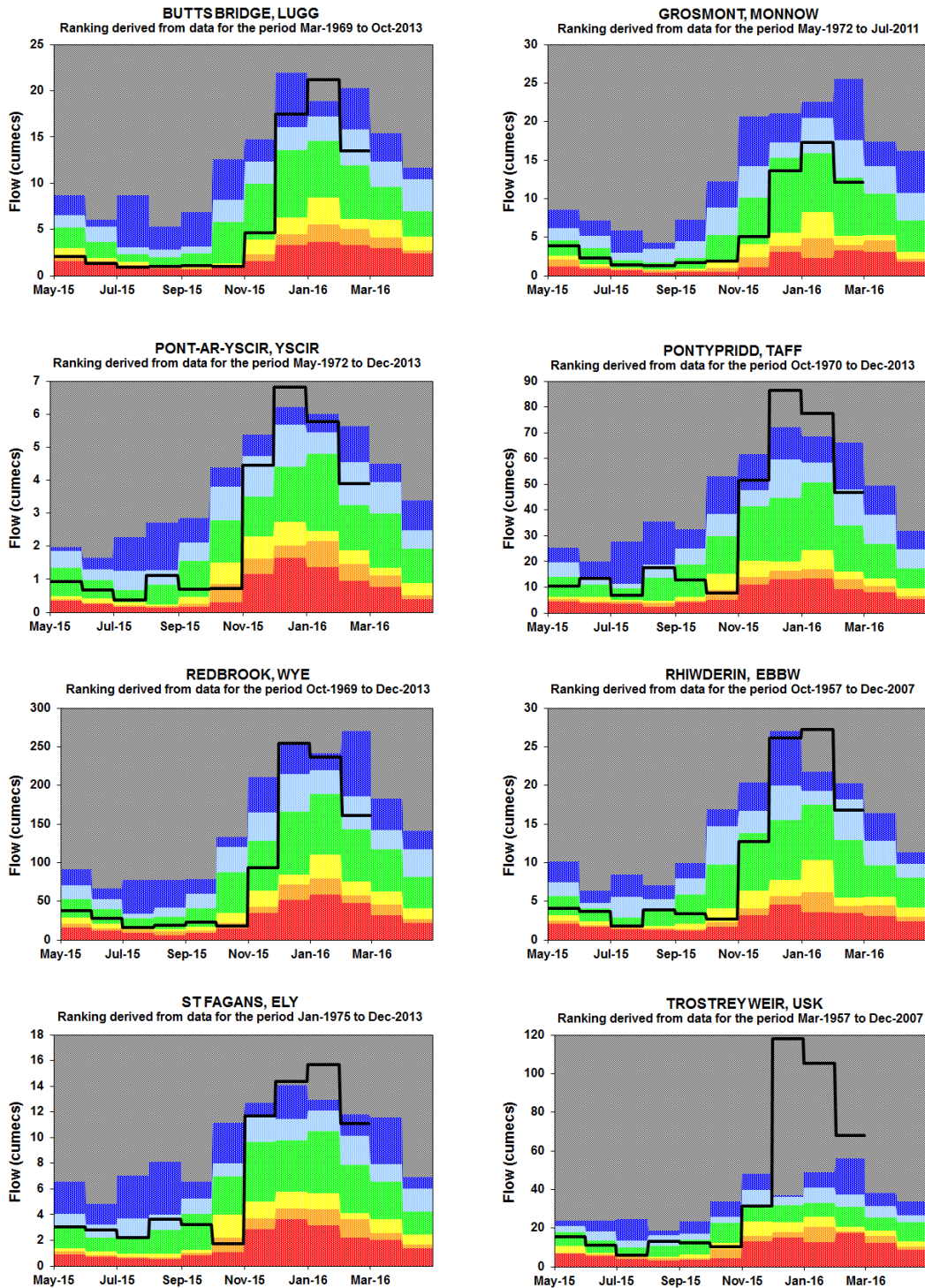
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River Flow Charts

Figure 12: River Flow Charts: South East Wales



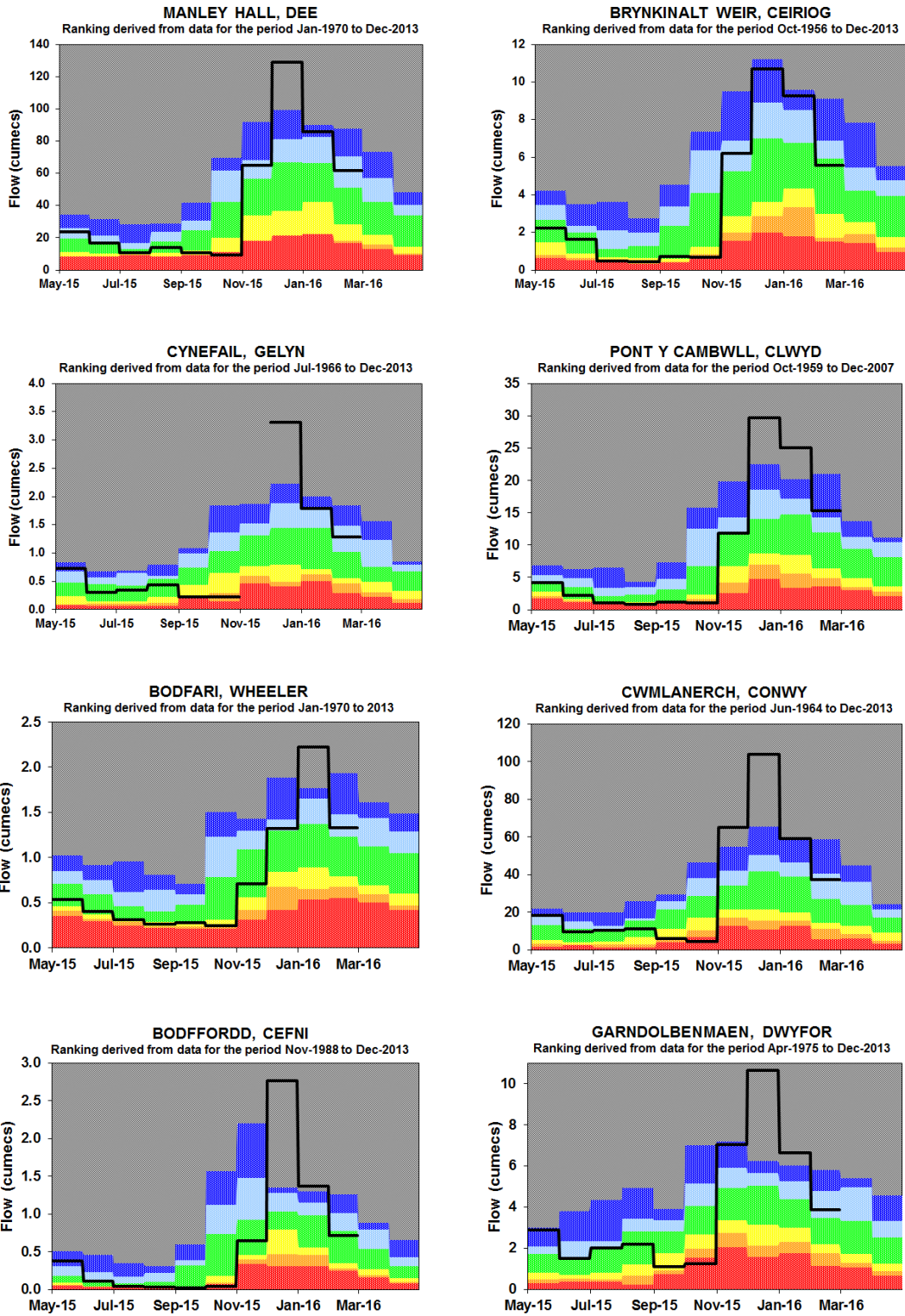
Monthly mean river flows for the last 10 months classed relative to the analysis of historic river levels (Source: Natural Resources Wales).

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Figure 13: River Flow Charts: North Wales



Monthly mean river flows for the last 10 months classed relative to the analysis of historic river levels (Source: Natural Resources Wales). (Please note that there is no data available for River Gelyn at Cynefail in November 2015)

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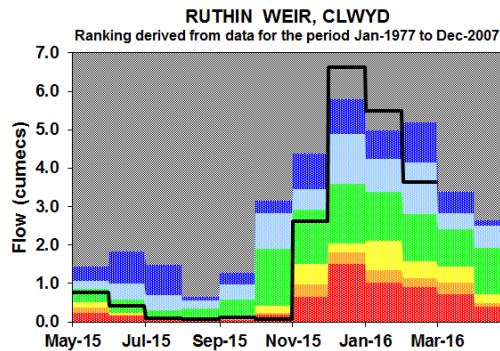
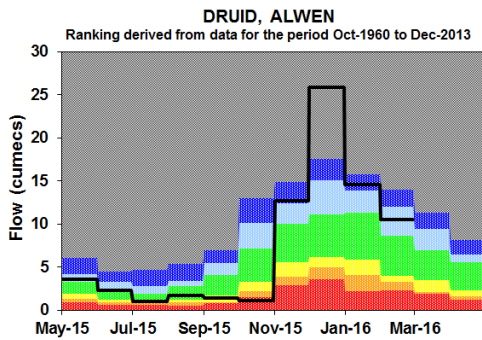
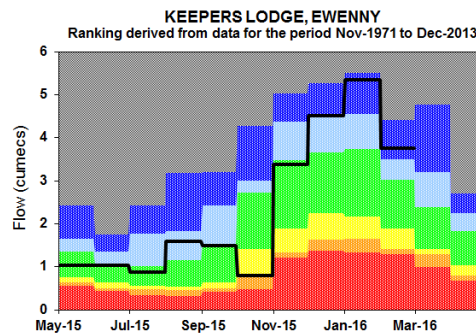
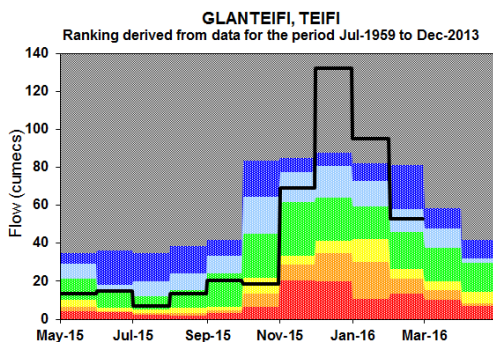
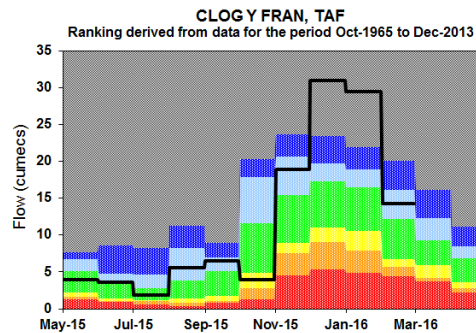
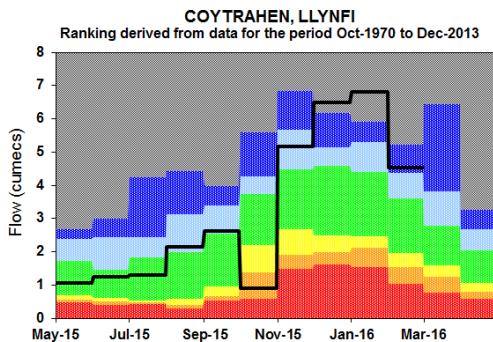
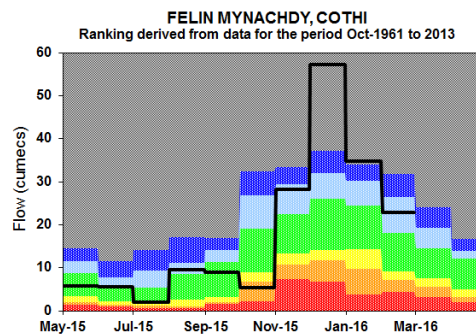
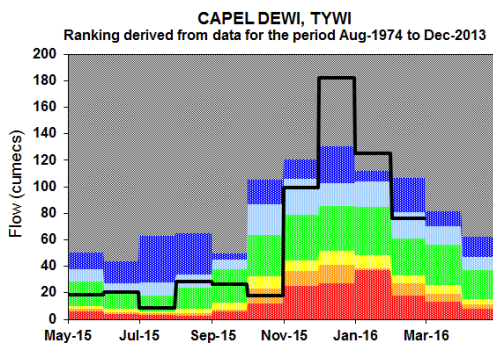


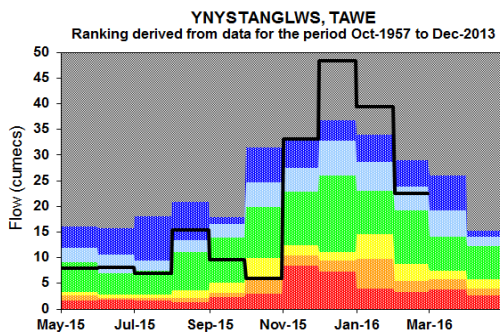
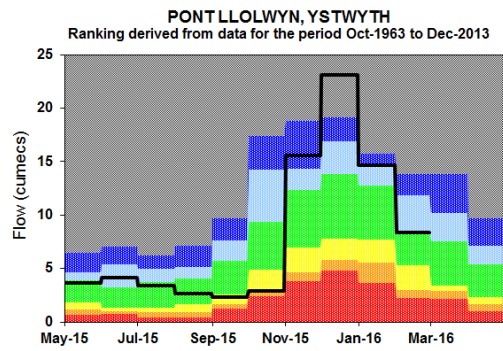
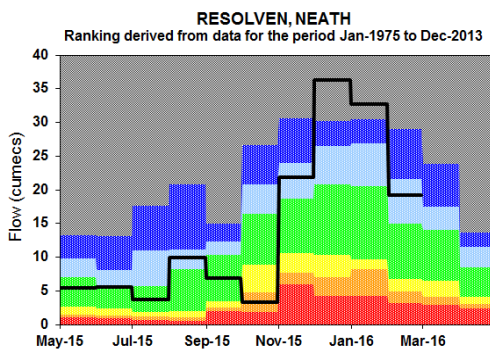
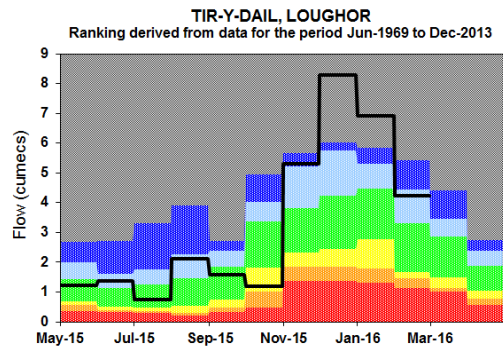
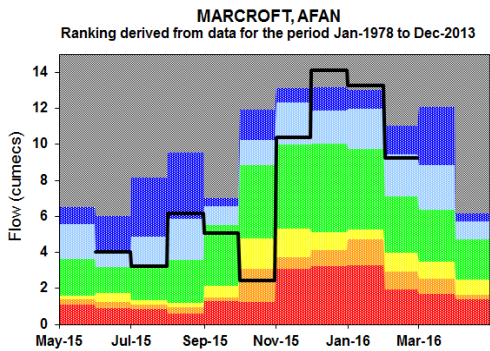
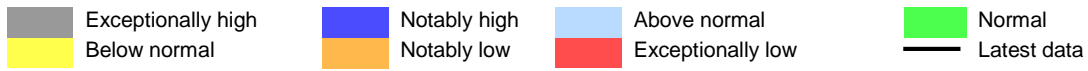
Figure 14: River Flow Charts: South West Wales



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Monthly mean river flows for the last 10 months classed relative to the analysis of historic river levels. (Source: Natural Resources Wales). (Please note that there is no data available before June 2015 for the site of River Afan at Marcroft)

Groundwater Levels

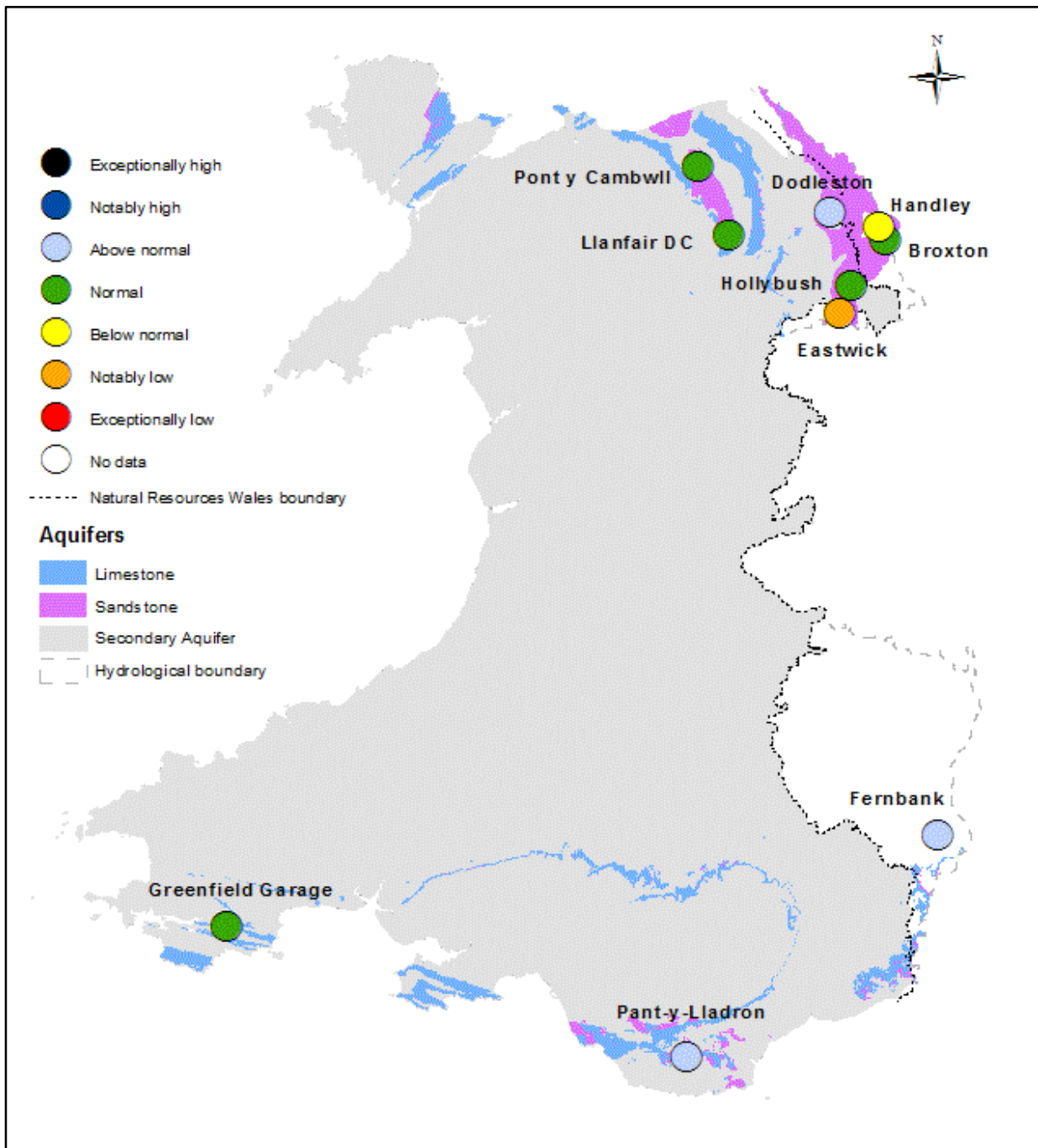


Figure 15: Groundwater levels at the end of month classed relative to an analysis of historic February groundwater levels (Source: Natural Resources Wales and Environment Agency).

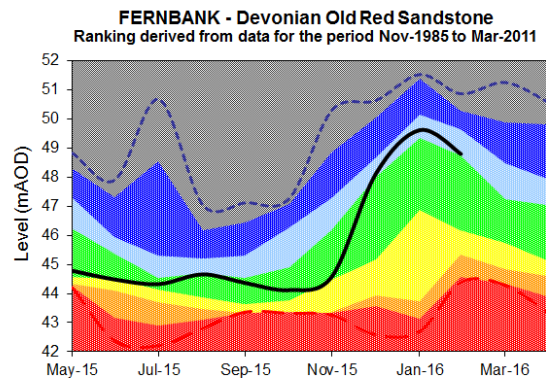
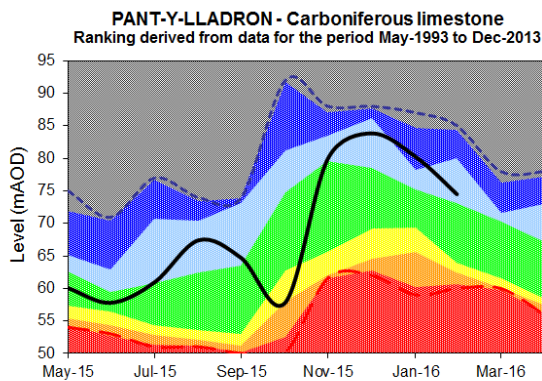
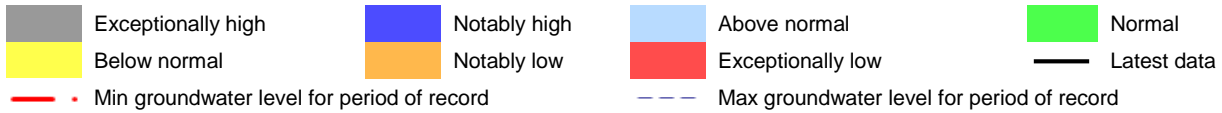
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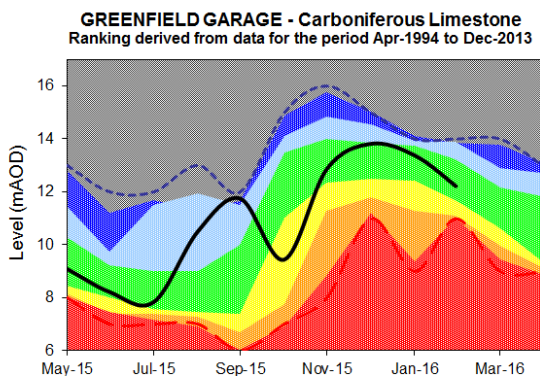
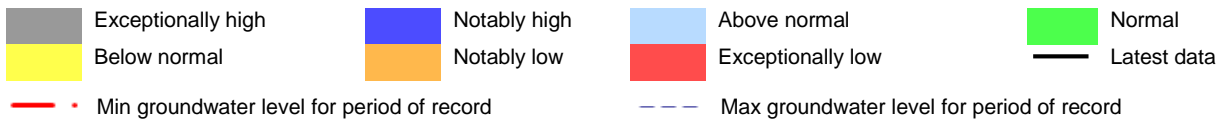
Groundwater charts

Figure 16: Groundwater level charts: South East Wales



End of month groundwater levels for the past 10 months for index sites (Source: Natural Resources Wales).

Figure 17: Groundwater level charts: South West Wales



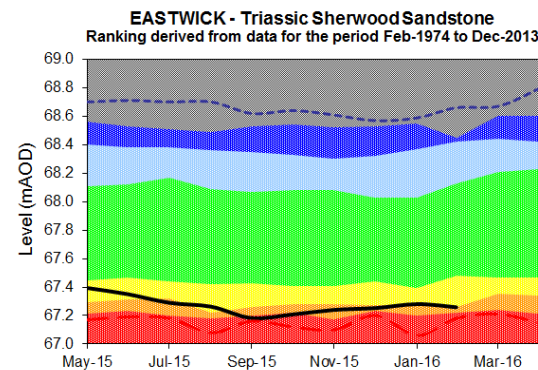
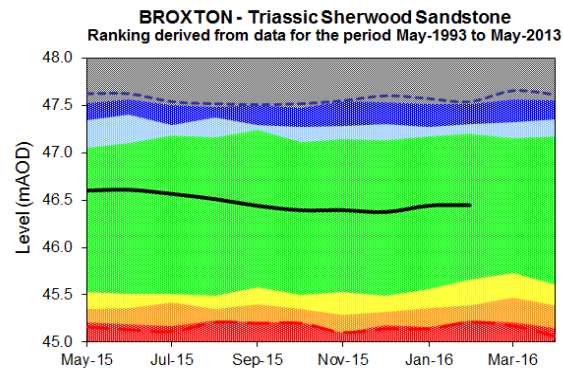
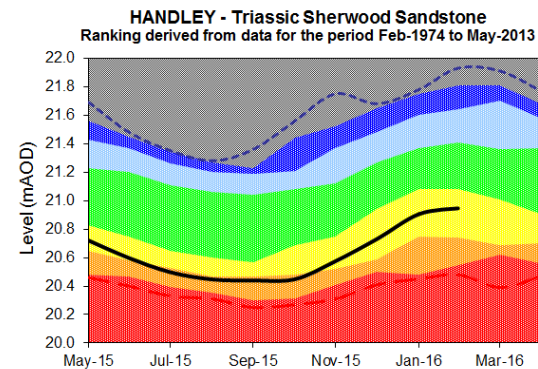
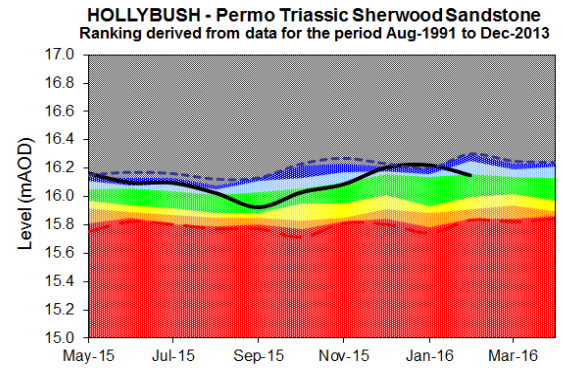
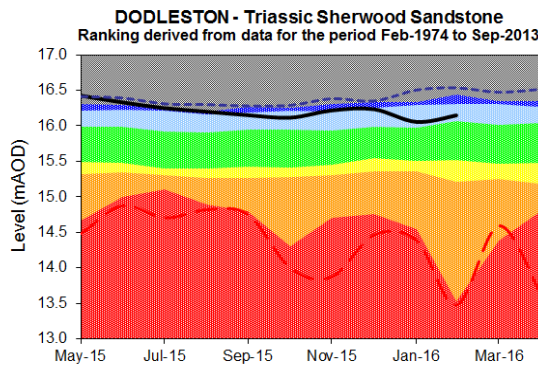
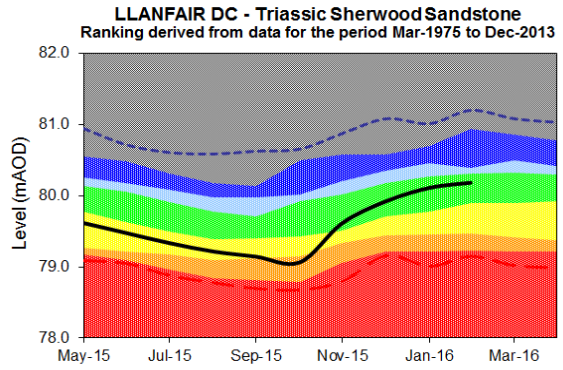
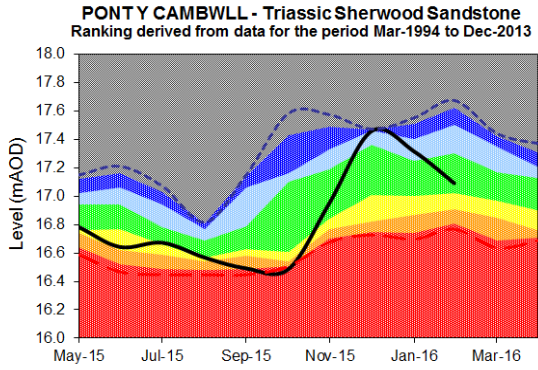
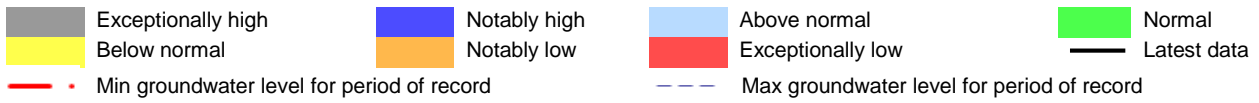
End of month groundwater levels for the past 10 months for index sites (Source: Natural Resources Wales).

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Figure 18: Groundwater level charts: North Wales

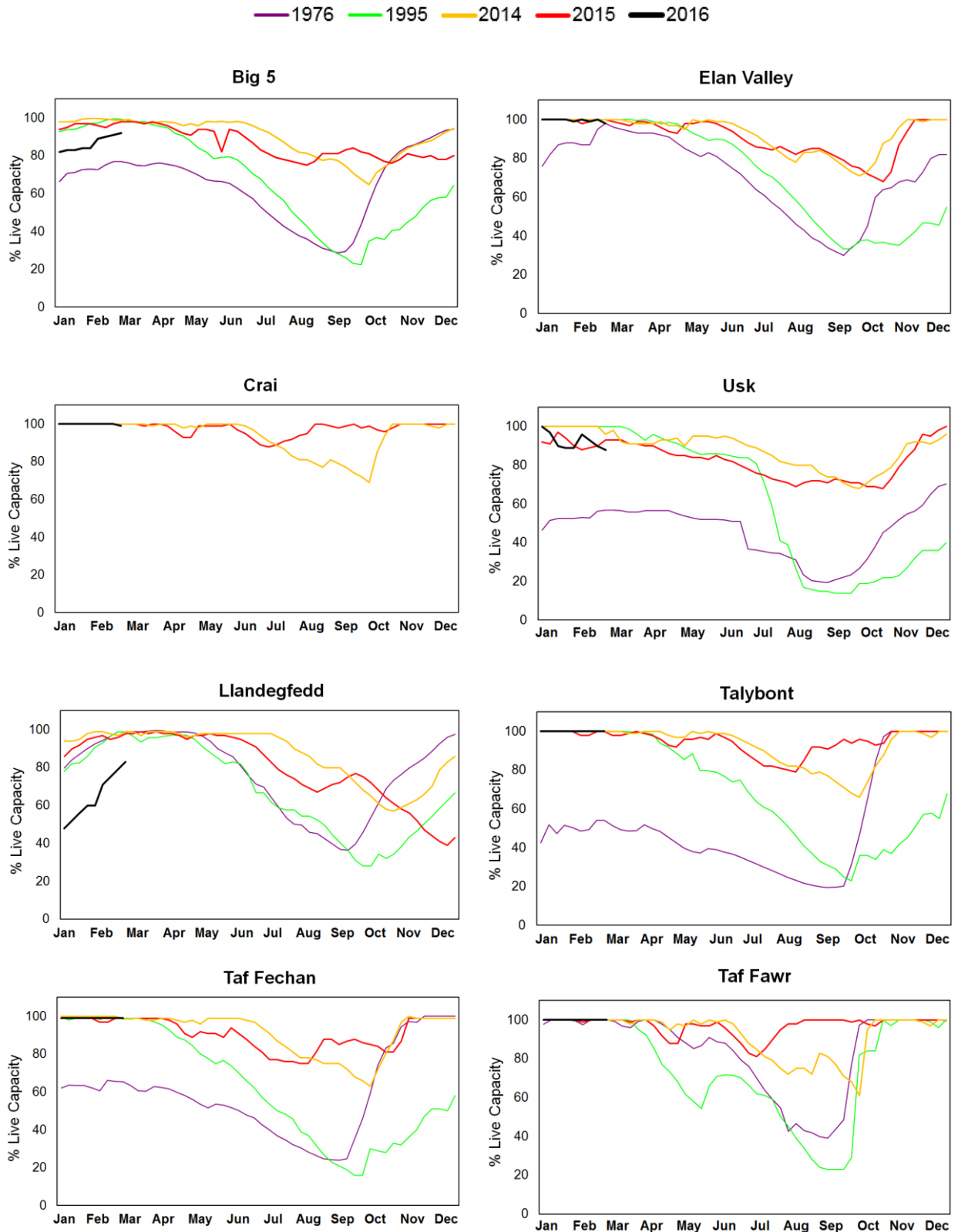


End of month groundwater levels for the past 10 months for index sites (Source: Natural Resources Wales and Environment Agency).

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Reservoir Storage

Figure 19: Reservoir charts: South East Wales



Weekly reservoir stocks for Natural Resources Wales index sites (Source: Water Companies)

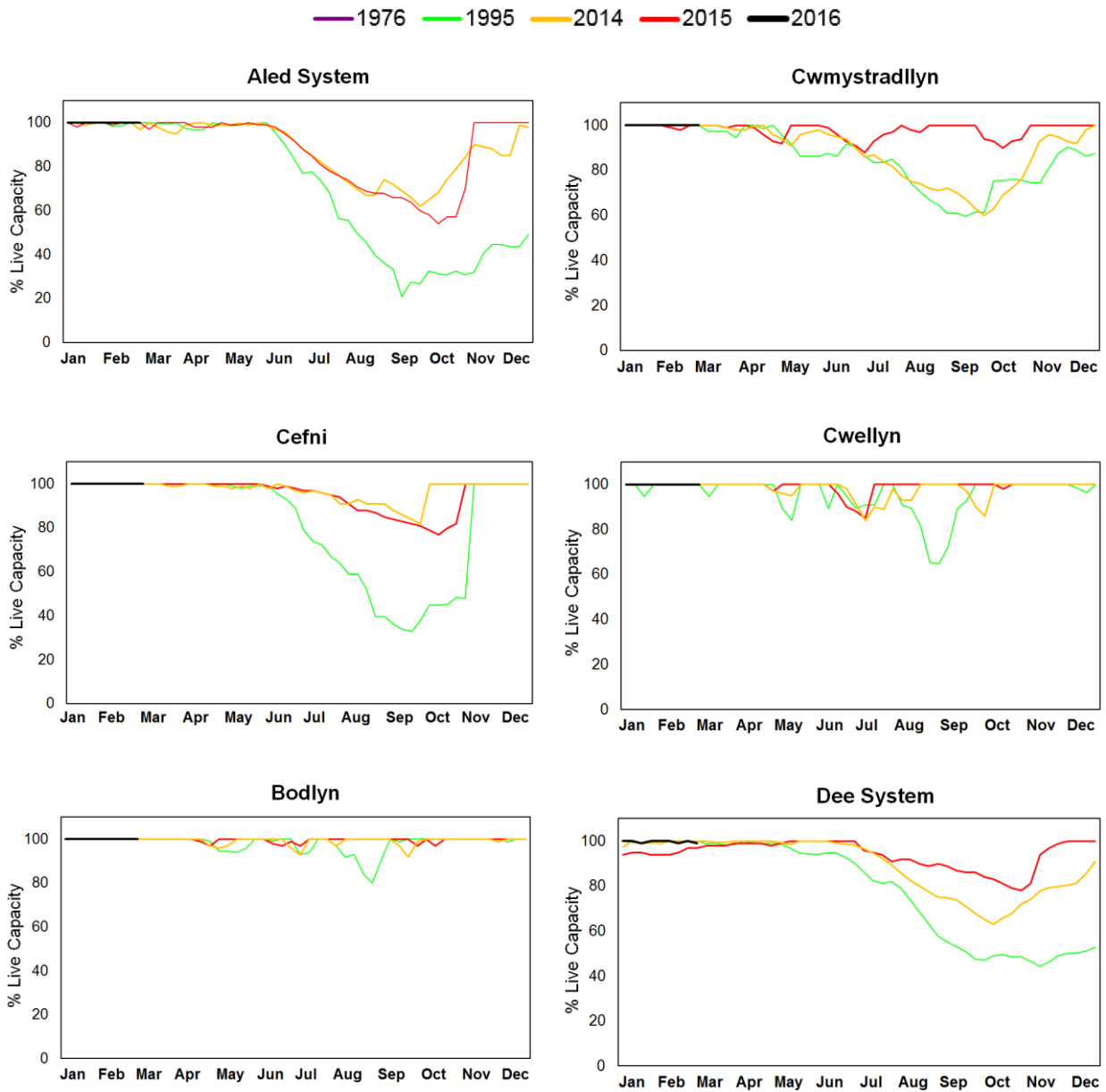
(*Please note that the Llandegfedd reservoir started to fill up after being drawn down for reservoir safety maintenance works)

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Figure 20: Reservoirs charts: North Wales



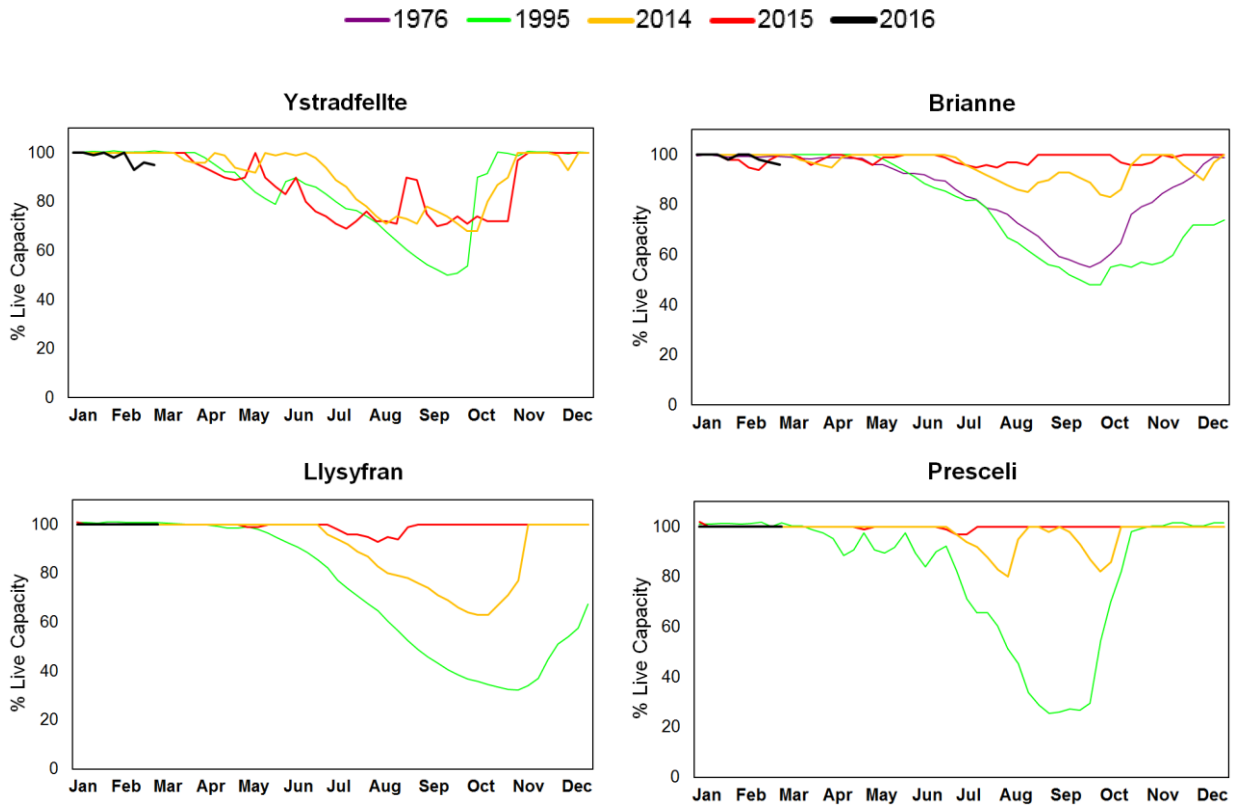
Weekly reservoir stocks for Natural Resources Wales index sites (Source: Water Companies).

All data are provisional and may be subject to revision.

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Figure 21: Reservoirs charts: South West Wales



Weekly reservoir stocks for Natural Resources Wales index sites (Source: Water Companies).

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Glossary

Term	Definition
Aquifer	A geological formation able to store and transmit water.
Areal average rainfall	The estimated average depth of rainfall over a defined area. Expressed in depth of water (mm).
Effective rainfall	The rainfall available to percolate into the soil or produce river flow. Expressed in depth of water (mm).
Groundwater	The water found in an aquifer
Meteorological Office Rainfall and Evaporation Calculating System (MORECS)	The Met Office provides climate data for grid squares measuring 40km by 40km across the UK using MORECS
Recharge	The process of increasing the water stored in the saturated zone of an aquifer. Expressed in depth of water (mm).
Reservoir live capacity	The reservoir capacity normally usable for storage to meet established reservoir operating requirements. It is the total capacity less that not available because of operating agreements or physical restrictions. Only under abnormal conditions, such as a severe water shortage might this additional water be extracted.
Soil moisture deficit (SMD)	The difference between the amount of water actually in the soil and the amount of water that the soil can hold. Expressed in depth of water (mm).

Categories

Exceptionally high	Value likely to fall within this band 5% of the time
Notably high	Value likely to fall within this band 8% of the time
Above normal	Value likely to fall within this band 15% of the time
Normal	Value likely to fall within this band 44% of the time
Below normal	Value likely to fall within this band 15% of the time
Notably low	Value likely to fall within this band 8% of the time
Exceptionally low	Value likely to fall within this band 5% of the time

Units

cumecs	Cubic metres per second ($\text{m}^3 \text{s}^{-1}$)
mAOD	Metres Above Ordnance Datum (mean sea level at Newlyn Cornwall).